Arizona State Science Standards (Grades 4-8 and High School)
satisfied by the Desert Tortoise Tracking Program.

Grade 8

Strand 1

Concept 1: Observations, Questions, and Hypotheses
Formulate predictions, questions, or hypotheses based on observations. Locate appropriate resources.

PO 1. Formulate questions based on observations that lead to the development of a hypothesis.
(See M08-S2C1-01)

Concept 2: Scientific Testing (Investigating and Modeling)
Design and conduct controlled investigations.

PO 1. Demonstrate safe behavior and appropriate procedures (e.g., use and care of technology, materials, organisms) in all science inquiry.

PO 2. Design a controlled investigation to support or reject a hypothesis.

PO 3. Conduct a controlled investigation to support or reject a hypothesis.

PO 4. Perform measurements using appropriate scientific tools (e.g., balances, microscopes, probes, micrometers).

PO 5. Keep a record of observations, notes, sketches, questions, and ideas using tools such as written and/or computer logs.
(See W08-S3C2-01 and W08-S3C3-01)

Concept 3: Analysis and Conclusions
Analyze and interpret data to explain correlations and results; formulate new questions.

PO 1. Analyze data obtained in a scientific investigation to identify trends.
(See M08-S2C1-08)

PO 8. Formulate new questions based on the results of a previous investigation.

Concept 4: Communication
Communicate results of investigations.

PO 1. Communicate the results of an investigation.

PO 5. Communicate the results and conclusion of the investigation.
(See W08-S3C6-02)

Strand 2

Concept 2: Nature of Scientific Knowledge
Understand how science is a process for generating knowledge.

PO 1. Apply the following scientific processes to other problem solving or decision making situations:

- *observing*
- *questioning*
- *communicating*
- *comparing*
- *measuring*
- *classifying*
- *predicting*
- *organizing data*
- *inferring*
- *generating hypotheses*
- *identifying variables*

PO 2. Describe how scientific knowledge is subject to change as new information and/or technology challenges prevailing theories.

PO 4. Explain why scientific claims may be questionable if based on very small samples of data, biased samples, or samples for which there was no control.

Strand 4

Concept 4: Diversity, Adaptation, and Behavior
Identify structural and behavioral adaptations.

PO 1. Explain how an organism's behavior allows it to survive in an environment.

PO 2. Describe how an organism can maintain a stable internal environment while living in a constantly changing external environment.

PO 3. Determine characteristics of organisms that could change over several generations.

PO 4. Compare the symbiotic and competitive relationships in organisms within an ecosystem (e.g., lichen, mistletoe/tree, clownfish/sea anemone, native/non-native species).

PO 5. Analyze the following behavioral cycles of organisms:

- hibernation
- migration
- dormancy (plants)

PO 6. Describe the following factors that allow for the survival of living organisms:

- protective coloration
- beak design
- seed dispersal
- pollination